

# National Manufacturing Debate 2015

20 May 2015

*Cranfield*  
UNIVERSITY



How do we develop the capability for  
effective reshoring to the UK?



Free access to UK Total Cost of Ownership Estimator™ (TCO-UK): [reshorennow.co.uk](http://reshorennow.co.uk)

**The Manufacturer**

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## Contributors

### Edited by

**Callum Bentley**, Managing Editor, *The Manufacturer* magazine

### Report editor

**Patrick McLaughlin**, Senior Lecturer in Manufacturing Management, Cranfield University

### Layout and design

**Paul Wallis**, Driftdesign Ltd • [www.getyourdrift.com](http://www.getyourdrift.com)

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## What is the annual manufacturing debate?

An annual debate launched in 2010 hosted by Cranfield University to provide an independent national forum for supporters of UK-based manufacturing. Stakeholders who attend the debate include manufacturing companies, engineers and scientists, academics, national and local government, finance providers, trade bodies, membership organisations and educational providers.

Now in its sixth year, the largest manufacturing-focused debate in the UK brings together manufacturing professionals from a range of sectors to discuss and debate current challenges in the industry. The event is designed to encourage networking and collaboration across the sector to enable continued growth. On Wednesday, May 20th 2014, following a range of presentations from keynote speakers, the sixth National Manufacturing Debate (NMD) took place. The 2015 topic was “How do we develop the capability for effective reshoring to the UK?”

Previous National Manufacturing Debates have focused on:

2010: Manufacturing for recovery

2011: Investment, incentives and innovation

2012: Enhancing the supply chain for growth

2013: Does the UK need a manufacturing strategy?

2014: How can the UK improve its manufacturing productivity?





# Keynote presentations



## Keynote: LORD ALEC BROERS Past President of the Royal Academy of Engineering

Lord Alec Broers opened the event by stating that manufacturing is now as important to the UK as it has ever been. Reshoring is a topical issue, with the subject being discussed worldwide. Lord Broers noted that the UK economy is still not in good shape, with the deficit growing at a higher rate than most other countries. Thus the issue of reshoring is of particular interest. However, the issue of lower cost overseas that led to the initial offshoring must also be considered. Lord Broers stated that salaries in China are increasing at the rate of 13% per year on average – thus obviating any cost advantage in relatively few years. However, although the cost gap has closed, it is still relatively less expensive to

manufacture offshore for many businesses. Reshoring brings some issues associated with IP and there are examples of large organisations which choose to keep new technologies and high value manufacturing processes in their own country until they are more mature, and can be offshored.



## Keynote: PROFESSOR RAJKUMAR ROY Director of Manufacturing, Cranfield University

Professor Rajkumar Roy started by stating that £15bn could be added to the UK economy by reshoring. Sustaining the reshored activity is a key aspect of the reshoring process. To retain this added value, steps need to be taken to ensure that the revenue growth and job creation is sustainable.

Professor Roy described the research undertaken by Cranfield for the Debate. Data over the past 25 years on offshoring and on reshoring were analysed. Published documents, both academic and trade journal publications, were analysed for

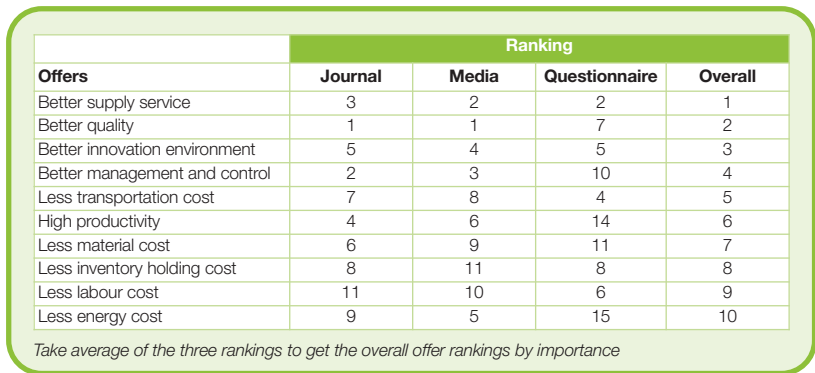


FIGURE 1 Outcomes - Offer ranking overall  
(Source: Cranfield University)

**£15bn**  
 could be added to the UK  
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 aspect of the reshoring process

offshoring and reshoring content. A small questionnaire was conducted amongst UK organisations. Reshoring is becoming a topic of discussion. The results indicate a growth in the area of reshoring since around 2009. 200 journal papers and 900 media articles were evaluated. This was supported by a questionnaire.

According to published material, the aspects that attract companies to reshore to the UK are related to quality, management and service provision. The survey showed something slightly different (Figure 1). This indicated shorter lead-time as being the most important. Combining the findings, better supply is the number-one aspect for encouraging reshoring. Second was quality performance, third was innovation

environment. Cost is seventh in the list. Innovation is a key component of ensuring reshoring is sustainable.

The difference between aerospace and other sectors was also examined (Figure 2). Aerospace and Oil & Gas are the most demanding sectors. Food and Drink demand most from the area of price.

The survey indicated that 33% of companies were not willing to maintain manufacturing in the UK. This is a challenge for government, for academics and for industry. All have to work together to make sure manufacturing stays in the UK. 83% of surveyed companies did not feel they had adequate support from Government.

The research mapped the gap between offers – factors that affect reshoring – and national capabilities. Professor Roy stated that if you look

at business supply service, which is essentially about supply chain gaps, it very much depends on business culture as a national capability. The mapping produced a summary of six capabilities needed in the country to sustain reshoring.

1. Business ecosystem
2. Business culture
3. Customer location
4. Labour skill and availability
5. Resource cost and availability
6. Regulation

FIGURE 3 Key National Capabilities – to sustain reshored production (Source: Cranfield University)

Professor Roy then introduced a cost of ownership model developed by the reshoring Initiative in the USA. This model was modified by the research team for use in the UK. This will be free to British industry.

Professor Roy also reported the Manufacturing Well Being Profile for 2015. Compared to 2014, the current profile shows income growth has improved against other sectors, but work related ill-health has increased too.

In concluding, Professor Roy noted that the top three factors for encouraging reshoring were supply service, quality and innovation. The Aerospace and Oil & Gas sectors were the most demanding in terms of reshoring. To encourage reshoring, the UK must provide an appropriate business ecosystem and culture, customer demand – particularly public procurement, appropriate skills and availability, resource availability and regulation.

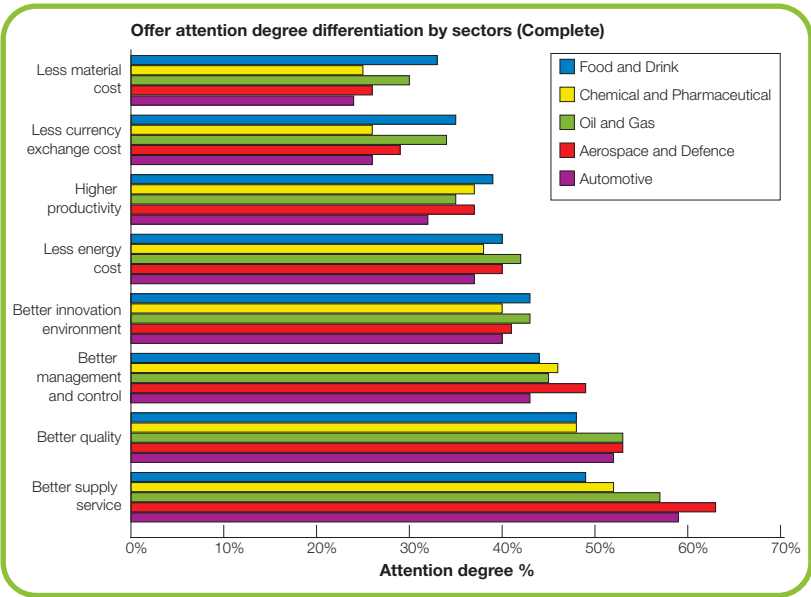


FIGURE 2 Top offers differentiation (by sector) – All literature (Source: Cranfield University)

## The power and the potential



Reshoring in the UK is like the Yeti in the Himalayas – it was a subject of much discussion and speculation, but was something you hardly ever saw with your own eyes

**As Director General of the CBI, JOHN CRIDLAND is the key spokesperson for the business community in the media, on public platforms and with the government. He leads the CBI – the voice of business – in the UK and represents it internationally.**

John Cridland began by saying that until recently, reshoring in the UK is like the Yeti in the Himalayas – it was a subject of much discussion and speculation, but was something you hardly ever saw with your own eyes. However, today the debate on reshoring has moved beyond this. A more reasonable description of reshoring in the UK would now be the

kingfisher – once endangered, it is making a recent comeback. It is still rare but can sometimes be seen. Firms will only return parts of their supply chain to the UK if the business environment is in good health. Ideas, people and materials will encourage this reshoring. Reshoring is part of an industrial renaissance in the UK. To make reshoring work in the UK, to encourage this industrial renaissance, there needs to be a relentless focus on medium sized businesses – the British Mittelstand – the forgotten army of the UK economy. Three million small businesses are worth 50% of the economy. 500 large companies are worth 30% of the economy. 6000 research intensive Mittelstand companies are worth 22% of the gross value added in the UK economy, and we never talk about them. In reshoring there needs to be a focus on the Mittelstand. Mr Cridland stated that at the last CBI conference, he described reshoring as being on his optimistic list. 20 CEOs of large European businesses are considering reshoring to Europe. Large companies

became vulnerable by offshoring – pushing risk into their supply chain and losing visibility and control over this aspect. Thinking globally still requires companies to act locally. Since 2012 UK vehicle manufacturers have already reshored over £1 billion of purchasing. The Vauxhall Vivaro van manufactured in Luton is a good example of such a case, £185 million invested in Luton, securing 1200 jobs for the next 10 years. This is a complete contrast to a few years ago when there were concerns about having any automotive assembly in this region.

Britain's biggest manufacturing sector is the food and drinks industry. Pot Noodles are now made back in the UK – in Yorkshire. Companies that meet customer demand by having faster delivery are finding that UK manufacturing allows delivery lead times that are impossible with a Chinese manufacturing source.

Mr Cridland stressed that what he wanted was more than a short-term reshoring to gain immediate benefits. He wanted reshoring to be part of an industrial renaissance. To make this happen we need to build an



# £30 BILLION

The amount CBI economists  
have estimated could inject  
into the UK economy  
through reshoring by 2025

innovation environment. He stated JLR's successful example of this, where the business now carries out 90% of the research and development in the UK. The UK R&D base is driven by a global supply chain. To build an innovation ecosystem that puts the UK on the map we need to double departmental funding for Innovate UK and focus on supercharging the R&D tax credit system. The R&D should also focus on the D part of R&D. There is not enough attention paid to this aspect of innovation.

The second part of the reshoring agenda was skills. This is already hitting firms as the economy starts to pick up speed. The skills challenge the UK faces is nothing less than a car-crash in slow motion. We need to double the number of STEM-trained graduates and triple the number of STEM trained apprentices. We also need to greatly increase the number of females in the STEM-trained workforce. There is much potential in

this area. Industry has to do its part in expanding skills in its supply chains; in taking part in schools outreach programmes and in dealing with gender stereotyping.

Thirdly we have to enhance and protect the UK's materials capabilities to assure the success of reshoring. It is essential to ensure UK manufacturing has access to good materials supply. The materials industry is responsible for half a million jobs in the UK. The UK materials capabilities can be protected by getting government and UK foundation industries to work more

closely together. They are not seen as sexy as high value manufacturing. German industry takes materials much more seriously than the UK does.

In concluding Mr Cridland stated that reshoring cannot be taken for granted. Reshoring is not a given. We have to do everything we can to turn what is now a trickle into a flow. The growing middle class in China is no guarantee that reshoring to the UK will take place. We have to play to our strengths. By creating an innovative, skills-rich environment where materials that companies need are available and affordable, we can encourage firms to reshore for good. The prize for strengthening our supply chains is also enormous. CBI economists have estimated that we could inject £30 billion into the UK economy by 2025, if we get this right. Industrial renaissance could add half a million high-quality new jobs to the UK economy. We can achieve this by working together: government, business and academia.



The 2016 National  
Manufacturing  
Debate will be held  
on May 24 and 25

# Getting business back



**TOMAS JASKELEVICIUS,**  
Business Development  
Director, Arginta Group  
has more than 10 years’  
experience in engineering  
subcontracting business in  
the EU. He has worked in  
the fields of metal  
processing, electronics  
and plastics with various  
manufacturing companies  
in Lithuania and customers  
in the EU.

Tomas Jasklevicius described his experience in attracting companies to offshore to Lithuania. Diversification was adopted as an approach to reduce the risk. From metals processing, different industries such

as shipbuilding, lifting equipment, renewables and transport were pursued.

The customers were able to avoid large fixed costs and minimise operating costs by adopting this approach. Research and Development was also co-developed to support the manufacturing

operations. A limit of half-day of travel was set between industrialisation and manufacturing. Products being manufactured in Lithuania are developed in Europe and then sent to customers world-wide.

Lithuania is not low cost – China is cheaper. However, Lithuania has the capability to develop innovative ideas through having a highly skilled workforce. For such a small country, there are many graduates available to incoming companies. There are

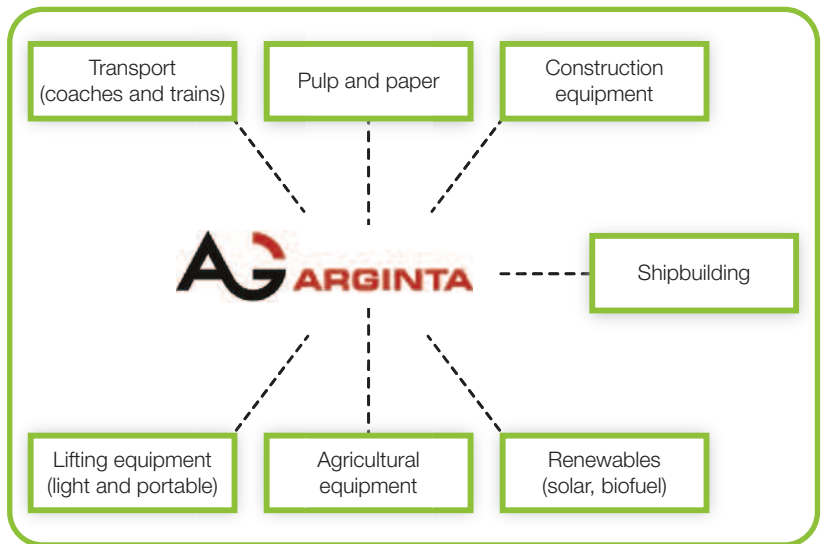


FIGURE 4 Diversification of markets and industries  
(Source: Cranfield University)



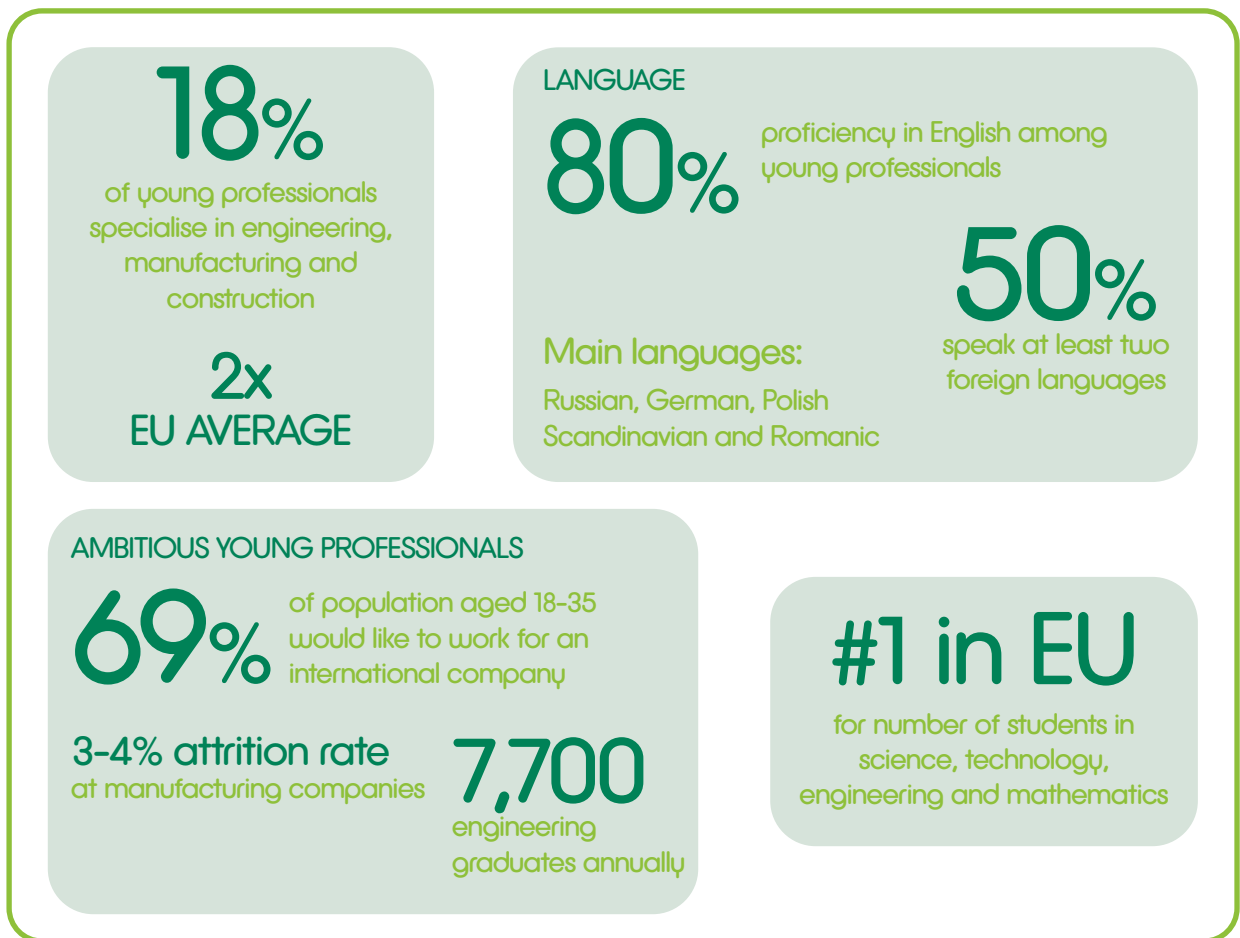


FIGURE 5 Talent available  
(Source: Cranfield University)

almost 8000 graduates each year in the country. The workforce has good language skills. 80% are able to speak English with many able to speak two foreign languages.

Although a simple concept, getting companies to work together was difficult, as they were operating outside their comfort zone. Increasing specific training was undertaken by creating a training school along with governmental support. Mr Jaskelėvicius described the lessons they gained from ABB offshoring production to Lithuania. The company was coming from Finland and experience indicated that the high social costs and social support provided in Finland allowed Lithuania to provide a faster more responsive service to the company than was available from Finland.

Over a five-year period the Lithuanian approach has facilitated sustainable growth for the economy. By making complex solutions for Supply Chain Management available, reducing delivery times & costs, providing easy access to a qualified labour force, a very competitive environment was created leading to sustained growth in revenue and employment. Mr Jaskelėvicius concluded by saying that it was not the number of hours worked that delivered competitive advantage, but the output achieved from the people.

The 2016 National Manufacturing Debate will be held on May 24 and 25

David Kynaston



**DAVID KYNASTON, current Chairman of the AMSCI Investment Board took to the stage to highlight some of the issues the UK supply chain has to overcome in order to make reshoring a success.**

David Kynaston opened his keynote by observing that he has seen a growth of manufacturing returning to Europe. AMSCI's contribution to reshoring has so far been relatively small in comparison to the total grants awarded to UK Manufacturing. Prior to becoming involved in AMSCI Mr Kynaston had been involved in offshoring and supply chain decisions for a large multinational business. He described how the supply chain was analysed to determine the best landed cost (including taxation) for each supply chain. He commented that it is disappointing sometimes when discussing reshoring with companies that numeracy is not used

to support the decisions being made. Understanding how you have bettered the landed cost and how this can be defended is vitally important.

Mr Kynaston then stated that activity in reshoring often happens at Tier 1 or Tier 2 levels in the supply chain. Often the prime is inviting its suppliers to reshore. The problem is that there is little investment flow in the direction of the suppliers. It is only the OEM that is exposed to end market pricing. Therefore by using function and feature, the OEM can influence end market pricing. Tier 1 and Tier 2 are exposed to ex-factory pricing and consequently have little opportunity to add features that deliver additional margin. This results on a squeeze on margins that has an impact on reshoring decisions. High volume manufacturing has extremely low commercial margins and extremely high asset utilisation. Such organisations need access to finance to facilitate growth. Medium volume, the essential area for current reshoring, has higher margins and average asset utilisation. They are sometimes self-funded for growth but this is not always the case. Low volume has even higher margins and lower asset utilisation.

Characteristics		
High volume	M	Low commercial margins
	A	Extremely high asset utilisation
	F	Needs access to finance for growth
Medium volume	M	Higher margins
	A	Average asset utilisation
	F	Could sometimes be self funded
Low volume	M	Very high margins
	A	Can be asset lazy!
	F	Not high borrowing need

FIGURE 6  
(Source: Birmingham City Council - Department for Business, Innovation & Skills - Finance Birmingham)

OEMs can raise equity finance while Tier 1 will have more limited financing options. Tier 2 is likely to be very restricted in accessing finance options.

How are we equipped to finance this ambition	
OEM	Probably quoted company
	Has a high use of debt finance (low cost)
	Can raise equity finance
Tier 1	Mix of large private and some quoted companies
	Limited financing opportunities
Tier 2	Private enterprise
	Often owner managed
	Has great difficulty with all finance sources

FIGURE 7  
(Source: Birmingham City Council - Department for Business, Innovation & Skills - Finance Birmingham)

Mr Kynaston stated that OEMs tend to be very interested in reshoring, “but not on their penny”. Tier 1 or Tier 2 have difficulty accessing finance. AMSCI can often help with this requirement. Mr Kynaston concluded by summarising the key elements for middle ranking companies are in understanding and managing the supply chain and in accessing finance; along with greater government supply chain intervention to act as a catalyst for continued sustainable growth.

The 2016 National Manufacturing Debate will be held on May 24 and 25

## Ian Pearce



**IAN PEARCE is the Managing Director at Brinsea Products Ltd., a company which designs and manufactures egg incubation products. He shared his reshoring success story with the audience.**

Mr Ian Pearce described how his company reshored parts from China to the UK. Brinsea Products, based in Somerset, supplies egg incubation products primarily for small scale poultry breeders and specialist bird breeders. The company exports 75% of its products.

The company designs and assembles its products in the UK. However, it was bringing in plastic injection moulded products from China. Brinsea designed and produced its own tooling. Each of the company's products is made from a set of plastic

parts. Each part is made on a very expensive steel tool. For a number of years the tooling was based in China and parts were produced there.

Reshoring was considered and the results of the analysis was that:

Landed costs: no overall difference

Lead times: much improved

Quality: no overall difference

Security of tools: much improved

Finance of tools: possible

A key issue was that should the Chinese supplier fail, then the chances of recovering the tools was minimal. Additionally, financing new tools in the UK was considered easier.

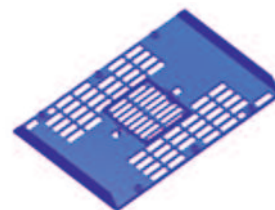
A Kanban system was implemented with a local supplier to reduce lead-times from 16 weeks to less than a week. Quality from China was very good, but security of tooling was considered to be an issue. The decision was made to reshore three years ago. The tools are in Cardiff. Brinsea has benefited from shorter delivery times, lower stock holding (reduced by 8% on average), full

A Kanban system was implemented with a local supplier to reduce lead-times from 16 weeks to less than a week

insurance cover for the high value tools, ability to raise lease finance of new tools, and at least 6 UK jobs created. The only negative is that part quality is less consistent than with the Chinese supplier, and this remains an ongoing issue.



Brinsea's Octagon 20 Egg Incubator



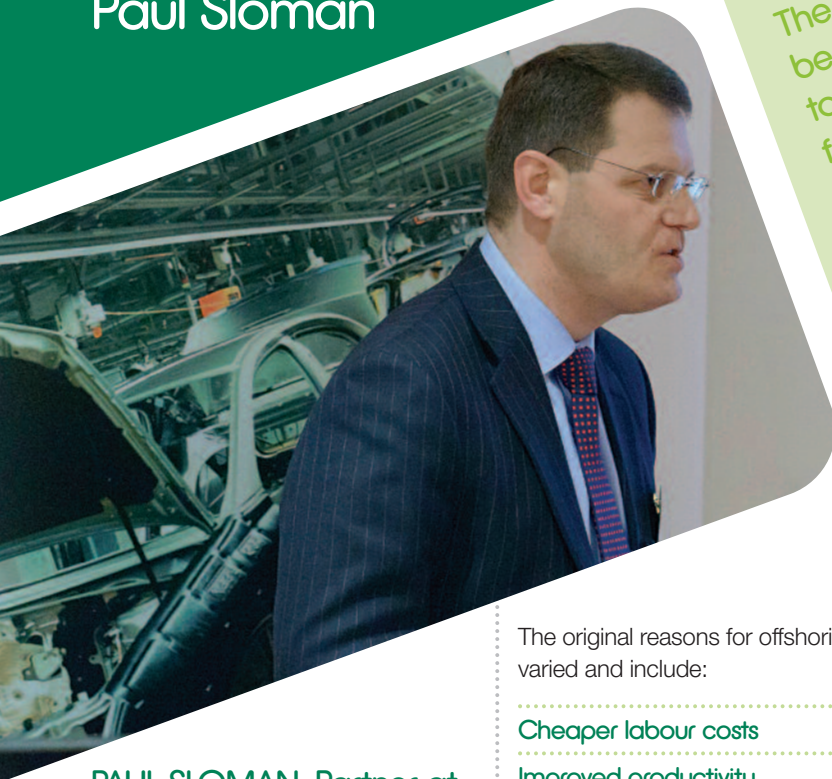
Each product is made from a set of injection moulded plastic parts



Each plastic part is injection moulded from an expensive steel tool



## Paul Sloman



**PAUL SLOMAN, Partner at PricewaterhouseCoopers LLP leads the company's UK diversified manufacturing sector team.**

Mr Paul Sloman began by suggesting that the future would not necessarily be similar to the past situation of large factories in the UK churning out product for consumption across the world. He suggested the future, although different, might be better than that. Mr Sloman noted that 30 years ago, nearly 20% of the workforce was employed in manufacturing. Last year this was around 7%. The UK has slipped in the world ranking of gross value added from 5th to 11th, with UK manufacturing outstripped in growth by services.

The original reasons for offshoring are varied and include:

Cheaper labour costs

Improved productivity

Lower trade barriers

Global communication

Produce in the consumption market

Access to growing populations  
e.g. Asia

UK productivity levels do not help the situation. The UK is second from last amongst G7 countries, with only Japan behind the UK. Mr Sloman stated that manufacturing is vital to the UK economy. Most importantly, it drives innovation and value adding jobs. He went on to suggest that the reasons for reshoring beginning to happen are a total cost of ownership focus; other operational costs, such as travel, quality and inventory; political, operational and reputational risk; wage costs and government incentives. However, not all offshoring is bad. Additionally countries such as China have vast economies of scale, so competing on non high-value products may not make sense. For

The reasons for reshoring beginning to happen are a total cost of ownership focus; other operational costs, such as travel, quality and inventory; political, operational and reputational risk; wage costs and government incentives

the future Mr Sloman suggested that digitisation along with customer focus, customisation and integrated services will impact heavily on reshoring. However, only the most profitable parts of the value chain should be reshored. The start and end of the manufacturing process are the most obvious areas. Also R&D and after-sales-service. These high value stages are becoming increasingly dominating parts of the value chain. Mr Sloman suggested there is still much that needs to change. Skills shortage – apprenticeships and graduates remains an issue. Innovation spending remains low – 1.7% of GDP – well behind many other countries. UK productivity still lags other countries. Infrastructure and land use poor – rail and roads to get products to customers. Ports to facilitate export. Capital and political investment – how new manufacturers are funded. Specialised clusters – to facilitate this trend, e.g., East London Technical City.

There will clearly be winners and losers. Low cost, high volume electronics are unlikely to return. Textiles may well return as the level of automation increases. High value added activities such as bio-pharma are obvious candidates. In conclusion Mr Sloman suggested that this was worth 200,000 UK jobs and an annual output increase of £2 billion.

## Dick Elsy



**DICK ELSY is the Chief Executive of the UK's High Value Manufacturing Catapult. In his talk he switched things up by challenging the idea of reshoring in favour of focusing on improving the sector's current productivity.**

Mr Dick Elsy suggested a different tack – retaining manufacturing in the UK through improving productivity might provide better benefits. The UK remains in the doldrums. UK productivity has regressed compared to its competitors. Mr Elsy suggested that the UK could no longer follow the standard rules of productivity improvement through continuous improvement, and that the only way to deliver step changes in productivity was through the adoption of new technologies. He described the use of a Schuler press, installed at the

National Composites Centre, that reduced cycle time from an average of several hours autoclaving to two minutes.

He believed that despite all the logical reasons for companies reshoring, one of the most compelling reasons was the attractiveness of the UK as an R&D base and the quality of the innovation support system.

Mr Elsy described a small company that manufactured cutters, Technicut, that was able to liaise with a Japanese tool holder manufacturer Nikken. The result was a significant productivity gain in manufacturing in

Decisions made by multi-nationals are being influenced more and more by access to know-how. Once offshored, it is always more difficult to return it and this is particularly relevant for the R&D element

Rolls-Royce turbine discs that resulted in a new facility in Tyne and Weir. Nikken set up a R&D facility in the UK as a result of this collaboration. Overall a good result in avoiding jobs being offshored.

Decisions made by multi-nationals are being influenced more and more by access to know-how. Once offshored, it is always more difficult to return it, and this is particularly relevant for the R&D element.

In conclusion Mr Elsy stated that reshoring is important, but keeping manufacturing in the UK is more important. He suggested that a successful eco-system to support manufacturing was essential. This eco-system should also include skills in engineers and technicians.





## Dr. Felipe Rubio Castillo



**How does a country like Mexico, and its approach to its local manufacturing base compare with that of the UK? DR. FELIPE RUBIO CASTILLO, Deputy Director of Mexican R&D organisation, CIDESI, explained.**

Dr Rubio Castillo opened his keynote by stating that Mexico and the UK have a common interest – in supporting local manufacturing. In the UK this is focused on reshoring and in Mexico it is focused on developing and supporting local manufacturing. Mexico has a population of 125 million people. The demographic profile that allows growth in the economy in medium and long term.

Dr Castillo stated that the concept of reshoring does not apply to Mexican manufacturing. He noted that what Mexico is doing to attract, retain and support firms in Mexico may have

relevance for reshoring. This is to build a local advanced manufacturing capability. Government support is significant with a clearly stated national strategy and policies. The Government sets the conditions to attract foreign investment. It promotes local conditions for manufacturing capabilities with structural reforms. It looks for the development of new facilities and promotes foreign investment with the appropriate conditions.

The automotive and aerospace industries are key areas of growth for Mexico. The Mexican automotive sector employs 15% of industrial labour and contributes to over 20% of the total manufacturing sector's GDP. It is the area of highest foreign research.

The Mexican aerospace industry has links to aerospace since the 1970s. Bombardier is an example of growth in this sector – between 2006 to 2012 having built and operating 5 plants with another due to come online soon.

Dr Castillo suggested that higher manufacturing capabilities require larger markets and this would be an area for joint research between Mexico and the UK.

## Harry Moser



**HARRY MOSER, Founder and President, Reshoring Initiative, USA gave some first-hand experience of the benefits some US businesses have seen after reshoring attempts.**

Harry Moser told delegates that his own research indicated that the USA found the same drivers as the UK for effective reshoring. Where the unit labour cost for the USA has remained fairly constant since 2000, in China the unit labour cost is 4 times higher in 2012 than it was in 2000. Mr Moser suggested that this was the single biggest factor driving reshoring. He added that in China the one-child-per-family policy means that they are



...in China the one-child-per-family policy means that they are losing 3.5 million from their workforce each year, so the unit labour cost in China will continue to grow

losing 3.5 million from their workforce each year, so the unit labour cost in China will continue to grow. In the USA, manufacturers see reshoring growing but from a small base. The Economists, however, describe it as a trickle not a trend – saying that they cannot see it in the macro numbers, and that it is often confused with a renaissance in manufacturing. Boston Consulting Group (BCG) reports indicate that the reshoring numbers are growing for companies reshoring. BCG state that China's cost advantage is about 5% compared to the USA. Mr Moser stated that he sees the total cost of ownership being around 5% difference, but that the actual manufacturing cost was around 25% less expensive in China.

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Mr Moser commented that the number of jobs being created due to reshoring or Foreign Direct Investment (FDI) was growing at a steady level. In 2010/2011, BCG identified the “tippling point” industries that are best positioned to be reshored to the USA. These industries, which include computers and electronic, were perceived to be most likely to reshore to the USA.

In comparison the Reshoring Initiative has a library about reshoring articles. This was mined for data and identified the industries that have reshored. The number of jobs reshored and cases (each case is a factory) reshored show that electrical and transportation equipment show the largest gains. This is similar to the UK data.

The negative reasons chosen for reshoring are topped by issues of quality, followed by lead-time/freight costs and wages/total cost of ownership. The positive reasons include brand image, automation and product redesign.

Mr Moser stated that Walmart is probably the single largest corporate force driving reshoring in the USA. Walmart has increased USA manufactured purchases by \$250 billion and added 1 million jobs over 10 years. In the 10th year 300,000 manufacturing jobs were added.

Skilled workforce availability is also a key driver. About 60% of cases are coming from China. The best example of USA reshoring is GE. There were a range of water heaters being manufactured in China. By carrying out a value engineering exercise, and manufacturing in the

USA significant gains were made in total cost and quality.

Mr Moser introduced some tools used to support reshoring. The Department of Commerce website in the USA shows the Assess Cost Everywhere tool (ACE). The Reshoring Initiative shows the Total Cost of Ownership (TCO) software. The TCO software is free to use and uses 29 cost factors configured by the user to determine the current value and a five year forecast of total cost of ownership. It includes pull down menus that are automatically inserted and freight rates for 17 countries along with duty rates for parts or tools, e.g. moulds.

In conclusion Mr Moser suggested that the UK could benefit from more documented cases, providing analytical tools, identifying and target imports and a focus as much on suppliers as on OEMs. Investment and the skillset of the workforce are factors that need to be considered in adopting further reshoring. “Think of the trade deficit as an asset to be mined for manufacturing growth!” he finished enthusiastically.

#### Reshored industries: Top 10

Industry	Jobs	Cases
Transportation equipment	13823	33
Electrical equipment, appliances, components	9240	58
Computer, electronic products	3483	25
Machinery	2860	20
Apparel/textiles	2154	46
Fabricated metal products	1721	39
Food	1628	9
Wood products	1028	18
Medical equipment	738	17
Hobbies	723	29

FIGURE 8  
(Source: Reshoring Initiative Library. Cases 2007 through 12.3.2014)

# The Debate: How do we develop the capability for effective reshoring to the UK?

## The right to reshore

In order to give the reshoring debate context, the first area discussed was the definition of offshoring.

Paul Sloman stated that buying products from India is not offshoring. Jaguar is building a facility in China. The main reason for Jaguar's decision is being close to the market selling vehicles in Asia. This is actually strategic business expansion. Harry Moser said that when a company ships product from an overseas factory back to its home market, that is offshoring. David Kynaston took the view that offshoring is a phenomenon in the supply to an OEM. We need to not just focus on OEMs but rather the suppliers to OEMs.

The panel were asked on their view on currency impact on reshoring and as to whether we should remain in Europe. Harry Moser stated that several currencies are undervalued and when this is realigned, this will have a big impact on the reshoring decision. Dick Elsy said that it is normal to manufacture in the market where demand was. However, the company may retain the R&D and engineering in its home country. This

is true for BMW and JLR. Paul Sloman stated that in his view we should remain in the UK. Ian Pearce's opinion is that staying in Europe is more a reasonable approach. Dick Elsy said that for Catapults the collaboration with Europe was essential. Harry Moser stated that he would like to see the Euro disbanded as this gave Germany an unfair currency advantage. David Kynaston said it was logical to stay in. However, he warned that further restrictive labour legislation will erode competitiveness. Iain Gray felt that business does not respect boundaries. Europe is a significant market. Based on his experience in Europe, he felt that the cultural diversity in Airbus was advantageous, and that it was better to stay in Europe. Clare Marett argued that most businesses are pro-Europe. This was confirmed through surveys with hundreds of small/large businesses.

State aid was raised as an issue. David Kynaston said he would like to see greater support on guarantee schemes for loans. This could be government or bank guarantees. This has been much discussed but with little action so far.

## Panel members



Presented by:  
**Nick Hussy**  
Managing Director,  
The Manufacturer



**Dick Elsy**  
Chief Executive of the UK's  
High Value Manufacturing  
Catapult



**Professor Iain Gray CBE**  
Cranfield University



**David Kynaston**  
Chairman of the AMSCI  
Investment Board



**Clare Marett**  
Assistant Director, Advanced  
Manufacturing and Services  
at Department for Business,  
Innovation and Skills



**Harry Moser**  
Founder and President,  
Reshoring Initiative, USA



**Virander Paul**  
Deputy High Commissioner,  
Indian Embassy, London



**Ian Pearce**  
Managing Director,  
Brinsea Products Ltd.



**Paul Sloman**  
Partner,  
PricewaterhouseCoopers  
LLP

## The cost of ownership



### The question of why the Total Cost of Ownership (TCO) is not being studied in universities was raised.

**Rajkumar Roy** stated that parts of it are being taught, but hopefully in future, it will be more developed using the software tools in Cranfield University's programme. **Harry Moser** said a very cost effective opportunity was to train people on TCO analysis.

It was noted by a delegate linked to the automotive industry, that there is a perception amongst key decision makers that the UK has lower quality,

higher utility and higher employment costs. **Dick Elsy** said that there was a view, particularly in the automotive UK supply chain, that well-intentioned decisions made by senior people to make more of an effort to reshore are often not followed through by the purchasing team: that the purchasing team operates to a more simplistic model than the TCO approach. **Iain Gray** felt there was still a view outside the UK that manufacturing was considered to be further down the priority chain, than is the case. The issue is more with the general public perception and more PR work needs to be done for UK manufactured products and business environment for companies to reshore in UK. Discussion around the board table is one way to help this.

“... there is a perception amongst key decision makers that the UK has lower quality, higher utility and higher employment costs”

The question of whether manufacturing was actually the right fit for the UK was posed. **Paul Sloman** felt that it was vital for the UK. The supply chain needs to be considered as part of this. There are some industries that will probably never come back to the UK. **David Kynaston** said that global supply chains are here to stay. That which is relevant to the UK should be in the UK. We need to be more numerate about this. Wanting it is not enough. It must make economic sense. Access to market is what is killing mid-sized companies in the UK. **Iain Gray** added that well-being should also be considered along with the economic evaluation. **Clare Marett** added that we should manufacture in the UK, but also consider what it brings to the local community. **Virander Paul** stated that reshoring in the UK is compatible with Indian manufacturing.

The cost of energy affecting UK business was raised as an issue: should reducing energy consumption rather than reducing energy cost be a more appropriate approach? **Paul Sloman** noted that most businesses are taking energy costs seriously in UK. **Dick Elsy** commented that reducing energy consumption in manufacturing was “just the way we do things” in the UK. **Iain Gray** said that Innovate UK and its Catapults tackle electricity consumption in many of its schemes and collaborations with UK businesses. **David Kynaston** commented that because of the ways consumer electronics are sold, the unbundling of the supply chain to meet consumer requirements, this can be energy inefficient.



## Right people to reshore



### The skills issue was raised.

**Dick Elsy** advised delegates that the development of technicians is being undertaken through the apprentice schemes. **Paul Sloman** thought there was too much focus on putting people through university. It was noted that we have lost some of our SMEs due to unavailability of apprenticeships with proper training and availability of engineering skills. This issue is recognised by businesses and Government and is being tackled. The trend is now changing to allow more apprentices to join and progress in their work while studying.

There are some very niche quality top engineered products in UK but we need to address the perception gaps using PR for general public. **Dick Elsy** noted there appears to be a lack of metrology skills. This is particularly noticeable amongst smaller

companies. **David Kynaston** added that he found that there were no significant quality problems in outsourcing to China. Quality was rigorously controlled by the outsourcing company. However, there is a naivety in taking cost out of quality management. There needs to be greater capability to manage the quality in the supply chain. **Iain Gray** commented that there is a need to address perception of UK quality, as the reality is probably better than the perception. **Clare Marett** noted that lead-time and quality were the main issues causing companies to consider reshoring to the UK. Quality Management was in focus 20 years ago but is now embedded in industry and is not looked at in detail. It was suggested that we need to look again and focus on quality management.

The question of offshoring being initiated by process inefficiencies was suggested. The panel were asked if a step improvement in process performance was a suitable way to avoid offshoring. **Dick Elsy** responded by stating that there is extensive research in Germany that shows

investing in new machinery is vastly better than the British approach of proudly sweating the assets. Investing in new kit will improve throughput and productivity, even before adopting radically new technologies. **David Kynaston** noted that it is essential to allow those who control the current process to be responsible for defining the next. Too often, poor leadership allows decisions to be made that were only acts of escape – “if we outsource, then our process problems will disappear”. Mr Kynaston suggested that we are not dealing with the quality of leadership effectively, adding that the firms that are succeeding are defined by their leadership. These firms attract the quality that is needed. Japan used to be able to get better longevity of capital through continuous improvement.

The issue of making any reshoring sustainable was raised. **Iain Gray** commented that this will depend on the decision points. In aerospace the decision points are fairly infrequent. In consumer electronics the decision points can be every few months. Each decision point is a fresh opportunity to consider manufacturing location, and thus both offshoring and reshoring. **Harry Moser** added that there is a cultural aspect to this. It can depend on the approach of the senior managers making the decision.

The final question discussed was women in engineering. Many USA businesses are run by women with engineering qualifications. It is difficult to name many in the UK. There is zero activity to retain or return women to engineering. **Clare Marett** responded by noting that where a parent is an engineer there is more likelihood that the children will be interested in engineering. Atkins was noted as an exemplar of best practice in bringing women into engineering.

## Call to action



## CALL TO ACTION

The National Manufacturing Debate 2015 produced the following points of discussion:

- 1 Need to build an innovation environment in the UK
- 2 Double departmental funding for Innovate UK and focus on supercharging the R&D tax credit system
- 3 Double the number of STEM trained graduates and triple the number of STEM trained apprentices
- 4 Improve education level of the UK manufacturing workforce
- 5 Enhance and protect the UK's materials capabilities
- 6 Greater government supply chain intervention to act as a catalyst for continued sustainable growth
- 7 UK productivity must be improved through investment in new equipment
- 8 Consider the trade deficit as an asset to be mined for manufacturing growth
- 9 We have to sustain reshored production in the UK by improving our business ecosystem and labour skill and availability
- 10 Manufacturing Well Being Profile 2015: income growth has improved compared to other sectors, but work related ill-health has to be monitored and reduced

The 2016 National Manufacturing Debate will be held on May 24 and 25

[www.national-manufacturing-debate.org.uk](http://www.national-manufacturing-debate.org.uk)



# National Manufacturing Debate 2015

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National Apprenticeship Competition 2016 on the 24th of May:  
[www.national-apprenticeship-competition.org.uk](http://www.national-apprenticeship-competition.org.uk)

For more information about the National Manufacturing Debate please contact:

Dr Patrick McLaughlin CEng, FIET, FIMechE Manufacturing Department  
Cranfield University, Building 50, Cranfield, Bedfordshire, MK43 0AL

T: +44 (0)1234 750111 Ex 5484 F: +44 (0)1234 754605 E: [manufacturingdebate@cranfield.ac.uk](mailto:manufacturingdebate@cranfield.ac.uk)  
[www.national-manufacturing-debate.org.uk](http://www.national-manufacturing-debate.org.uk)

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Hennik Group, Elizabeth House, Block 2, 7th Floor, 39 York Road, SE1 7NJ

T: +44 (0)207 401 6033 F: +44 (0)207 202 7488 E: [c.bentley@hennikgroup.com](mailto:c.bentley@hennikgroup.com) [www.themanufacturer.com](http://www.themanufacturer.com)

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